UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY
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QUALITY ASSURANCE MEMORANDUM FOR ORGANIC CHEMICAL ANALYSES

Date: June 9, 2010

To: Jon Kemesrud, Project Manager
Office of Compliance and Enforcement, USEPA Region 10

From: Steven Reimer, Chemist
Office of Environmental Assessment, USEPA Region 10 Laboratory

Subject: Quality Assurance Review for the PCB Aroclor Analysis of Samples from Seattle Iron and Metals

Project Code: ESD-202A
Account Code: 20102011B10P501E50C

cc: Dave Terpening, Office of Compliance and Enforcement, USEPA Region 10

The following is a quality assurance review of the data for PCB Aroclor analysis samples from the above referenced site. The analyses were performed by EPA Region 10 Laboratory Chemists following US EPA Laboratory guidelines.

This review was conducted for the following samples:

10194000 10194001 10194002 10194003

1. Data Qualifications

Comments below refer to the quality control specifications outlined in the Laboratory's current Quality Assurance Manual, Standard Operating Procedures (SOPs) and the Quality Assurance Project Plan (QAPP). No excursions were required from the method Standard Operating Procedure.

All measures of quality control met Laboratory/QAPP criteria.

For those tests for which the EPA Region 10 Laboratory has been accredited by the National Environmental Laboratory Accreditation Conference (NELAC), all requirements of the current NELAC Standard have been met.

2. Sample Holding Times

Upon sample receipt, no conditions were noted that would affect data quality.

3. Sample Holding Times

The concentration of an analyte in a sample or extract of a sample may increase or decrease over time depending on the nature of the analyte. For this reason, holding time limits are recommended for samples and extracts. Extracts were analyzed within 40 days of preparation. No qualifiers were applied based on holding times.

4. Sample Preparation

Samples were prepared according to the method.

5. Initial Calibration/Continuing Calibration Verification (CCV)

Initial calibrations were performed on 05/18/10 and 05/27/10. Calibration curves met the coefficient of determination criteria.

The CCV for reported samples met the criteria for frequency of analysis and relative retention time (RRT) windows. The percent accuracies met the criteria of 80-120% of the true value.

6. Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSD)

LCS/LCSD are generated to provide information on the accuracy and precision of the analytical method and the laboratory performance. The LCS/LCSD recoveries were within the criteria of 70-130% with a relative percent difference ≤50%.

7. Blank Analysis

Method blanks were analyzed with each sample batch to evaluate the potential for laboratory contamination and effects on the sample results. Target analytes were not detected in method blanks.

8. Surrogate Spikes

Surrogate recoveries are used to help in the evaluation of laboratory performance on individual samples. The surrogate compound used for these analyses was decachlorobiphenyl. All surrogate recoveries were within the criteria of 50-150%.

9. Matrix Spike/Matrix Spike Duplicate Analysis (MS/MSD)

MS/MSD analyses are performed to provide information on the effects of sample matrices toward the analytical method. An MS/MSD analysis was performed using samples 10194400 (S1/S2). The MS/MSD recoveries were within the criteria of 30-150% with a relative percent difference ≤50%.

10. Compound Quantitation

The initial calibration functions were used for calculations. Reported quantitation limits were based on the initial calibration standards and sample size used for the analysis.

Sample 10194402 was prepared and analyzed in duplicate. The duplicate results rpd was ≤50%.

All manual integrations have been reviewed and found to comply with acceptable integration practices.

11. Identification

PCBs and the surrogate were identified based on chromatographic retention times of two dissimilar gas chromatography columns as determined from the initial calibration.

12. Data Qualifiers

All requirements for data qualifiers from the preceding sections were accumulated. Each sample data summary sheet and each compound was checked for positive or negative results. From this, the overall need for data qualifiers for each analysis was determined. In cases where more than one of the preceding sections required data qualifiers, the most restrictive qualifier has been added to the data.

The usefulness of qualified data should be treated according to the severity of the qualifier in light of the project's data quality objectives. Should questions arise regarding the data, contact Steve Reimer at the Region 10 Laboratory, phone number (360) 871 - 8718.

Qualifier	Definition
U	The analyte was not detected at or above the reported value.
J	The identification of the analyte is acceptable; the reported value is an estimate.